



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/567,772

02/09/2006

Masatoshi Kuwajima

4386.77746

5367

24978 7590 07/17/2008

GREER, BURNS & CRAIN  
300 S WACKER DR  
25TH FLOOR  
CHICAGO, IL 60606

EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

07/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,772	<b>Applicant(s)</b> KUWAJIMA, MASATOSHI	
	<b>Examiner</b> Justin R. Fischer	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>020906</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellweg (US 6,463,974) and further in view of Schelkmann (DE 1232845). Hellweg teaches a wheel assembly having a runflat support member formed of an annular shell 3 and a pair of rings 4, 5, wherein the ends of said shell are embedded within said rings. In this instance, however, a plurality of notches is not formed in the ends of said annular shell. Schelkmann, on the other hand, suggests the inclusion of notches at the marginal end portions of a curved tire component in order to prevent wrinkling and the buildup of stresses. It is emphasized that the tire component of Schelkmann is extremely analogous to the annular shell of Hellweg in that both are curved tire components- the benefits of reduced wrinkling would be expected to result in the tire of Hellweg in view of Schelkmann. It is further noted that applicant similarly attributes the benefit of reduced wrinkling and reduced buildup of stresses due to the inclusion of notches. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to include notches in the curved tire component (annular shell) of Hellweg.

As to the ends of the annular shell, the figures of Hellweg generally depict said ends as being significantly embedded in the respective rings. Furthermore, one of ordinary skill in the art at the time of the invention would not have formed the assembly such that the end portions are flush with the surfaces of the ring (equivalent to 100% coverage). Thus, the general disclosure of Hellweg suggests a significant amount of embedding without completely extending over the width of said rings and such a disclosure appears to be consistent with the broad range of the claimed invention.

Regarding the length of the notches, Schelkmann depicts the periodic inclusion of notches at the marginal end portions of a curved tire component. A fair reading of the reference suggests that the notches necessarily have some length and that said length is not significant as compared to the circumferential length of said tire component. One of ordinary skill in the art at the time of the invention would have readily appreciated the broad range of the claimed invention (between 1 and 15 mm) in view of the general disclosure noted above. It is emphasized that the notches are not included to define the predominant area of the end portions and thus, one of ordinary skill in the art at the time of the invention would have expected the notches to have a length in accordance to the claimed invention.

Lastly, with respect to the independent claim, Table 1 is not seen to provide a conclusive showing of unexpected results. In particular, one of ordinary skill in the art at the time of the invention would not have expected the notches to have a significant length and thus occupy a large area of the edge portions. It is evident that the notches must have some length and the results demonstrate, for example, that a relatively large

Art Unit: 1791

notch length (17 mm) is not as effective as smaller lengths (although it is better than a "notchless" assembly- comparative example 1). Additionally, it is evident that an increase in notch length would result in a reduction in tire weight (less material). Lastly, it is emphasized that the reference generally depicts a significant degree of embedding without completely extending over the width of said rings and such a disclosure appears to be consistent with the broad range of the claimed invention.

With respect to claims 2 and 3, Figure 1a depicts the notches as having a width that is slightly less than 1.0 times the width of the edge portion. Also, as detailed above, one of ordinary skill in the art at the time of the invention would not have expected the area of the notches to occupy a significant area of the edge portions (periodically included)- such an arrangement is consistent with the claimed relationship between the length of the notch and the alignment pitch. Also, applicant has not provided a conclusive showing of unexpected results for either of the claimed relationships. Lastly, with respect to claim 3, the connecting portion of Hellweg necessarily has a radius of curvature and the claim defines a broad range of values without providing a conclusive showing of unexpected results.

As to claims 4 and 5, Hellweg is silent as to the material of said annular shell. It is noted, though, that the Hellweg (in the background) suggests the use of metal to form similar ring assemblies. In particular, stainless steel represents one of the most common metallic materials used in a wide variety of applications/components, including tire components. Furthermore, the claimed breaking strengths are consistent with stainless steel (inherent property- approximately 860 MPa). Absent any conclusive

Art Unit: 1791

showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to form the shell from a material having the claimed breaking strength.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3 and 4 of U.S. Patent No. 6,843,288.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed dimensions (of the asperities or notches) would have been well within the purview of one of ordinary skill in the art at the time of the invention. In particular, claim 4 defines a wide variety of embodiments in which the pitch can vary between 1 and 20 mm and the amplitude can vary between 0.5 and 2.0 mm.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer  
/Justin R Fischer/  
Primary Examiner, Art Unit 1791